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## Deformations of Barbot representations into $SL(3, \mathbb{R})$ .

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We consider representations of surface groups into  $SL(3, \mathbb{R})$  associated with a certain family of cyclic Higgs bundles. These representations are not in the Hitchin component: they are deformations of representations studied by Barbot. We show that these representations are the holonomy of a geometric structure modelled on the space of full flags in  $\mathbb{R}^3$ , and are discrete and faithful in a strong sense: they are Anosov.

We will see how one can associate to these cyclic Higgs bundles a surface in the symmetric space equipped with a parallel distribution of tangent planes, and how this object can be used to construct a geometric structure and prove the Anosov property. This work is a collaboration with Samuel Bronstein.

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